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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10:069,695	08/05/2002	Roy Auerbach	USPL-77	3744

7590 10/29/2003
Maurice M Klee
Attorney At Law
1951 Burr Street
Fairfield, CT 06430

EXAMINER

MAHONEY, CHRISTOPHER E

ART UNIT	PAPER NUMBER
2851	

DATE MAILED: 10/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/069,695	Applicant(s) AUERBACH ET AL.	
	Examiner Christopher E Mahoney	Art Unit 2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-13 and 15-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 15-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the opaque layer comprising holes at locations corresponding to images from the exit pupil of the projection lens formed by the Fresnel and lenslet array combination must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. Figure 3 appears to show the holes being at the focal point of the Fresnel lenslet array combination.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-13 and 15-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear in claim 1 if the projection lens is part of what is being claimed or not. Claim 1 recites a rear projection screen for use with a projection lens but the lens itself is not positively recited.

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It is unclear what exit pupil is being referred to in claim 1, line 8. It is unclear if the applicant is claiming the exit pupil of the Fresnel lens and lenslet array combination or if the applicant is claiming the exit pupil of the [ambiguously recited] projection lens.

It is unclear what exit pupil is being referred to in claim 13, line 8. It is unclear if the applicant is claiming the exit pupil of the Fresnel lens and lenslet array combination or if the applicant is claiming the exit pupil of the projection lens

If the applicant is claiming in claims 1 and 13 that the opaque layer is at a point which corresponds to the images formed by redirecting the light from the projection lens through the Fresnel and lenslet array combination, it is unclear what the applicant means by “correspond to the images”. It is unclear if the applicant means at a focal point or at the full projection area. The figures appear to show the apertures at the focal point.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 6-7, 11-13, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by van de Ven (U.S. Patent No. 4,666,248). van de Ven teaches a rear projection screen for a rear projection display comprising a Fresnel lens 20, a lenslet array 17, which may be comprised of anamorphic lenses, apertures 15, and a protective coating layer 11. As discussed in col. 11, lines 31-35, the screen is used with a convention slide or film projector which will have an exit

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pupil from which images will be projected. The projected images then enter the Fresnel lens 20 on the light entering side 12 of the screen. The Fresnel lens changes the light beam projected by the exit pupil from a divergent beam to a collimated beam. (col. 2, lines 40-43). The collimated beam then enters the lenses 17 to be converged at the holes 15. (col. 4, lines 46-49). Thus the holes are at location which correspond to the images of the exit pupil formed by the combination of the Fresnel structure and the lenslet array. As described at col. 1, lines 67 to col. 2, line 2 this is done for the purpose of ensuring "that a maximum amount of light from the primary image-source reaches the viewing space and which minimizes reflections of ambient light to the viewing space."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over van de Ven (U.S. Patent No. 4,666,248). Van de Ven teaches the salient features of the claimed invention except for the specific half field of view. It would have been obvious to one of ordinary skill in the art at the time the invention was made to choose the appropriate filed angles, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Claims 2-5, 11-12, 15-18 and 20 are rejected under 35 U.S.C. 103(a) as being

unpatentable over van de Ven (U.S. Patent No. 4,666,248) in view of Guzman (U.S. Patent No. 4,184,672). Van de Ven teaches the salient features of the claimed invention except for a square/rectangular aperture, the CRT and pixel structure, and the specific viewing angles. Guzman teaches that round apertures and square/rectangular apertures were art known equivalents. Because they were art known equivalents, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a square/rectangular aperture instead of a round one.

Van de Ven in view of Guzman teaches the salient features of the claimed invention except for the specific half field of view. It would have been obvious to one of ordinary skill in the art at the time the invention was made to choose the appropriate filed angles, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Response to Arguments

Applicant's arguments filed July 15, 2003 have been fully considered but they are not

persuasive.

The applicant argues that the holes are at locations of the exit pupil of the projection lens. However this is not what is recited in the claims. The claims recite that the holes correspond to images of the exit pupil formed by the combination of the Fresnel structure and the lenslet array. The applicant argues that there is no discussion of an exit pupil in van de Ven and

therefore does not anticipate the claims. A rear projection screen will form images from the exit

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pupil of the projection lens. If it did not it would not function to project the images from the projector. Van de Ven is a valid patent and is presumed not to be inoperable. Where the images are directed (specifically at the holes of the opaque layer) is discussed in the 102 rejection supra.

The applicant further argues that van de Ven does not take into account how the Fresnel and lenslet array combination images the exit pupil in order to maximize desired (image) light and minimize undesired (ambient) light. The examiner disagrees. Van de Ven clearly states in col. 4, lines 49-52: "Thus, care is taken that substantially *all the signal lights traverses* the small apertures, whilst *most of the ambient light* entering the screen is **absorbed** and can no longer reach the viewing space." [emphasis added]

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited prior art discusses how imaging the exit pupil of projector by the projection screen is an inherent function of rear projection screen systems. The applicant is directed to review col. 1, lines 66 to col. 2, line 1 of Goldenberg (U.S. Patent No. 6,327,083) for example.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

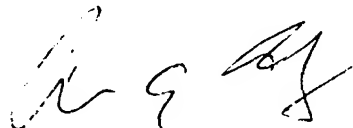
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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher E Mahoney whose telephone number is (703) 305-3475. The examiner can normally be reached on 8:30AM-5PM, Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on (703) 308-2847. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

A handwritten signature in black ink, appearing to read 'C E Mahoney', is positioned above the printed name.

Christopher E Mahoney
Primary Examiner
Art Unit 2851

CM